

WHAT IS CLAIMED IS:

1. A rotary press for printing patterns on a support strip comprising:
a driveable support to drive the support strip lengthwise at a selected speed;
a supply for supplying at least one strip material with a pattern thereon; the
supply for the strip material is arranged laterally of the support strip and laterally of
5 the lengthwise drive direction of the support strip;
a transfer device shaped and positioned for bringing the support strip and the
strip material together and for transferring patterns to the support strip at defined
locations;
an intermittent drive operable on the strip material for driving the strip
10 material through the transfer intermittently and at the speed of the support strip; the
intermittent drive being operable for driving the strip material from the supply in a
direction transverse to the lengthwise direction of the support strip; and
strip material redirection devices positioned after the supply for modifying
the direction of the material strip after the material strip leaves the supply and before
15 the material strip passes to the transfer device, from a supply direction transverse to
the lengthwise drive direction of the support strip to a transfer direction of the
patterns that is parallel to the lengthwise drive direction of the support strip.
2. The press of claim 1, wherein the supply of at least one strip material
includes a constant drive for driving the strip material at a constant speed;
a storage disposal for strip material arranged between the constant drive for
the strip material and the intermittent drive for the strip material wherein the storage
5 disposal stores strip material before it is driven by the intermittent drive.
3. The press of claim 1, wherein the supply of strip material includes a
plurality of independent ones of the supplies of strip material, and the independent

supplies are superimposed and positioned for providing strip material to the support strip.

4. The press of claim 2, wherein the intermittent drive of the strip material includes a drive roller which contacts the strip material after the strip material has passed the storage disposal;

5 a free rotation roller engageable with the drive roller so that the drive roller and the rotation roller together move the strip material; and

a contact device for selectively applying the free roller against the drive roller so that the strip material is pinched between the drive roller and the free rotation roller and driven by the rollers, and for moving the free rotation roller off the driving roller and halting the driving.

5. The press of claim 1, further comprising a constant drive operable on the strip material for receiving the strip material from the supply and for driving the strip material at a constant speed;

the strip material being in lengths with trailing and starting ends;

5 a junction device for connecting the trailing end of a length of the strip material to the starting end of another length of the strip material.

6. The press of claim 5, further comprising a reserve for a section of the strip material located between the junction device and the constant drive to hold strip material, thereby enabling a constant supply of the strip material to be made available during a joining operation performed by the junction device.

7. The press of claim 5, wherein the constant drive includes a plurality of the press rolls, each press roll for engaging the respective one of the strip materials

and a presser at each of the press rolls which is adapted for being intermittently raised allowing variation of the strip material flow on the respective drive and
5 allowing storage by adjustment of a position of a loop of the strip in the loop storage;
and

an automatic feedback loop arrangement for controlling a variation of the strip flow to provide an average position of a strip loop in the storage.

8. The press of claim 7, further comprising breaker rollers upstream of the constant drive, the breaker rollers being subdivided in a plurality of adjacent parts for disconnecting neighboring strip materials from each other for defining a plurality of the strip materials.

9. The press of claim 5, wherein the junction device includes a junction device support for a first supply reel and for a second reserve reel, each reel is for supplying strip materials;

a pivot axis for the junction device support, such that pivoting of the junction
5 device support around the pivot axis moves the supply reels toward and away from a position where one of the reels can supply strip material;

pivotal means on the junction device support for receiving the supply reels, the pivotal means being parallel and symmetric to the pivot axis of the junction device support;

10 guides and support members in the junction device support for the strip material and related to each of the supply reels, the guides and the support members being disposed symmetrically in the junction device support with reference to the pivot axis thereof;

a rotation drive for the junction device support for rotating the junction
15 device support around the respective pivot axis by 180 degree steps;

a junction forming device for applying the trailing part of a length of the strip material of one reel against an initial part of a length of the strip material of the other reel and for applying the ends against the junction device support to form the junction between the adjacent ends of the strip material on successive reels.

10. The press of claim 2, wherein the storage disposal of the strip materials includes a storage housing storing reserve parts of the strip materials, the storage housing having an entry for the strip material which has come from the strip supply and having an exit for the strip material to the intermittent drive for the strip material;

a loop creator associated with the storage housing comprising detectors to detect maximum and minimum storage limit positions of the strip material inside the storage housing.

11. The press of claim 2, wherein the constant drive for the strip material are downstream of the redirection devices for maintaining a constant tight portion of the strip material passing through the redirection devices.

12. The press of claim 2, wherein the redirection devices comprise linear driving member arranged on a bisectrix of the angle formed by the supply direction of the strip material and the lengthwise drive direction of the support strip for enabling the lengthwise direction of the strip material to form a 90 degree angle between its parts located upstream and downstream of the linear drive member, after the 180 degree rotation of the material strip around a linear drive member.

13. The press of claim 1, further comprising an additional storage disposal for outgoing strip materials after passing the transfer device and a pulling

5 device for pulling the strips through the additional storage disposal, the additional storage disposal being shaped and positioned for a loop of the outgoing strip to be formed there and the pulling device having a speed that is adjustable with respect to the average position of the loop of the strips in the additional storage disposal.

14. The press of claim 13, wherein the pulling devices are divided into two pulling devices and each is related to a respective drive for the strip material at a constant speed at almost the same speed.

15. The press of claim 13, further comprising operating software for the pressers for the defined speed drive and for the pulling devices and it is the same software, and wherein prior to the storage disposals (check above) are identical.

16. The press of claim 13, wherein the pulling devices are operable so that related strip materials are locked in step by rhythm given by a control system of the loops in the associated storage disposal for the strip.

17. The press of claim 4, wherein a profile of intermittent speed of the intermittent drive is obtained and operable through a combination of first and second rollers wherein one of the rollers is run at a constant speed w_c and the other roller is run at an intermittent speed w_i .

18. The press of claim 17, in which strips are maintained without friction over the roller surfaces by a vacuum.

19. The press of claim 16, wherein the constant speed w_c is adjusted by control means located over and under a zone extending between the rollers.